

COMPACT, FOUR PORT THIN FILM FILTER OPTICAL ADD/DROP MULTIPLEXER

Abstract of the Disclosure

A four port optical add/drop multiplexer (OADM) includes an optical filter reflective at a first wavelength and transmissive at a second wavelength. An input path having both first and second wavelengths is routed toward a first side of the filter. An optical DROP path is routed from a second side of the filter, to carry the transmitted second wavelength from the filter; and an optical ADD path is routed toward the second side of the filter for carrying an ADD signal, at the second wavelength. An output path carries the first and second wavelengths from the first side of the filter, including the ADD signal at the second wavelength, providing full OADM functionality, using a single filter. The device may include collimating lenses in the signal paths, and in one embodiment the filter can be a thin film filter fabricated directly on one of these lenses, thus improving optical performance.